

FLM-005-7

PROCARSA, S.A. DE C.V.

CERTIFICADO DE INSPECCION  
DE PRUEBAS MECANICAS Y ANALISIS QUIMICO

CLIENTE: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

PTM-05940-2018



INSPECTION CERTIFICATE OF MECHANICAL TESTS AND CHEMICAL ANALYSES

CUSTOMER: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

NUMBER: PTM-05940-2018  
DATE: ABRIL 04, 2018

DIAMETRO EXTERIOR : OUTSIDE DIAMETER :		ESPESOR DE PARED : WALL THICKNESS :		GRADO : GRADE :		ASTM A53-B		58 Kg/cm <sup>2</sup>		820 PSI		HOJA 1 DE 2										
REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS		REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS										
NUM. PROBEA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (0.2% S.L.)	ULTIMA TENSION TENSILE STRENGTH (0.2% S.L.)	% ELONG. 2"	LE/UT Y.S.T.S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE Pcm
		35000 PSI MIN.	60000 PSI MIN.	26 min.		0.300 max	1.200 max	0.050 max	0.045 max	---	---	---	---	0.500 max	---	---	0.400 max	0.400 max	0.150 max	---	---	---
4-16 Tc	172249	59 100	70 926	38	0.83	0.069	1.14	0.016	0.005	0.019	0.0040	0.009	0.210	0.031	0.029	0.004	0.021	0.019	0.007	0.0047		
Ts			76 548																			
15-16 Tc	172252	54 795	71 807	39	0.76	0.071	1.11	0.016	0.004	0.019	0.0040	0.008	0.200	0.026	0.026	0.004	0.026	0.025	0.008	0.0050		
Ts			78 054																			
12-1 Tc	172255	62 576	72 141	35	0.87	0.087	1.12	0.015	0.006	0.019	0.0040	0.009	0.200	0.027	0.030	0.004	0.025	0.025	0.008	0.0047		
Ts			79 593																			
68-18 Tc	172258	57 129	75 667	36	0.76	0.088	1.14	0.016	0.005	0.019	0.0060	0.010	0.220	0.023	0.034	0.003	0.025	0.021	0.008	0.0054		
Ts			75 435																			
6-26 Tc	172267	59 564	70 979	34	0.84	0.081	1.17	0.011	0.006	0.018	0.0020	0.009	0.210	0.026	0.040	0.004	0.019	0.024	0.008	0.0055		
Ts			77 741																			
52-5 Tc	172273	55 058	75 042	37	0.73	0.072	1.15	0.013	0.004	0.018	0.0030	0.008	0.210	0.021	0.032	0.003	0.020	0.020	0.007	0.0054		
Ts			80 091																			
42-8 Tc	172275	59 847	73 560	32	0.81	0.077	1.14	0.013	0.004	0.018	0.0030	0.008	0.210	0.026	0.027	0.003	0.020	0.022	0.007	0.0048		
Ts			83 851																			
50-18 Tc	172278	63 141	72 100	33	0.88	0.071	1.13	0.013	0.005	0.018	0.0030	0.008	0.210	0.025	0.039	0.003	0.018	0.024	0.008	0.0047		
Ts			78 404																			
17-26 Tc	173895	56 571	73 462	35	0.77	0.069	1.16	0.013	0.003	0.018	0.0030	0.010	0.200	0.031	0.036	0.003	0.026	0.026	0.007	0.0056		
Ts			77 261																			
29-26 Tc	173904	60 483	72 584	39	0.83	0.071	1.14	0.012	0.004	0.019	0.0030	0.008	0.200	0.037	0.036	0.004	0.027	0.022	0.007	0.0056		
Ts			78 157																			
142-26 Tc	173905	62 737	69 985	40	0.90	0.068	1.13	0.013	0.004	0.017	0.0030	0.009	0.200	0.019	0.036	0.004	0.023	0.026	0.009	0.0056		
Ts			76 006																			
91-26 Tc	173915	62 368	73 333	40	0.85	0.076	1.17	0.013	0.003	0.018	0.0030	0.008	0.210	0.029	0.036	0.003	0.026	0.025	0.007	0.0056		
Ts			79 242																			
133-2 Tc	173917	64 020	72 647	38	0.88	0.071	1.13	0.018	0.004	0.018	0.0050	0.009	0.200	0.018	0.045	0.003	0.018	0.019	0.005	0.0056		
Ts			77 923																			
63-26 Tc	173923	57 621	71 746	32	0.80	0.072	1.12	0.014	0.002	0.018	0.0020	0.006	0.210	0.022	0.031	0.003	0.021	0.023	0.005	0.0056		
Ts			80 143																			

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WE CERTIFY THAT THE ABOVE DESCRIBED PIPE HAS BEEN MANUFACTURED,  
SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE FOLLOWING  
SPECIFICATION, AND MEETS THE APPLICABLE REQUIREMENTS THEREIN

ING. LUIS ALFONSO DE LOS SANTOS RIVERA  
SUPERVISOR DE LABORATORIO METALURGICO  
METALLURGICAL LABORATORY SUPERVISOR

ASTM A53



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**CERTIFICADO DE INSPECCION  
DE PRUEBAS MECANICAS Y ANALISIS QUIMICO**  
INSPECTION CERTIFICATE OF MECHANICAL TESTS AND CHEMICAL ANALYSES

CLIENTE: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

CUSTOMER:

PEDIDO CLIENTE / P.O.

16637

PARTIDA (S)

196645-10 / 199040-10 / 199909-10 / 200860-30

ITEMS

58 Kg/cm<sup>2</sup>

820 PSI

HOJA 2 DE 2

NUMERO

FECHA

ABRIL 04, 2018

NUMBER

DATE

PRESSION HIDROSTATICA:

HIDROSTATIC TEST:

GRADO: ASTM A53-B

GRADE:

0.250"

ESPEJOR DE PARED:

WALL THICKNESS:

REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS

% ELONG. LE/UT.

25 min.

35000 PSI MIN.

60000 PSI MIN.

LE/UT

Y.S.T.S

% ELONG.

2"

ULTIMA TENSION

TENSILE STRENGTH

(P.S.I.)

69 728

74 294

70 805

76 535

71 433

76 353

72 133

76 353

73 091

76 588

70 352

75 111

61 969

59 058

65 814

66 180

62 903

64 146

173924

176000

177893

177898

177900

177901

COLADA

BEAT

173924

176000

177893

177898

177900

177901

NUM. PROBEA

DESCRIPTION

168-3 Tc

Ts

12-21 Tc

Ts

85-22 Tc

Ts

63-22 Tc

Ts

83-26 Tc

Ts

81-23 Tc

Ts

C

0.300 max

Min

1.200 max

P

0.050 max

S

0.045 max

Cb

---

V

---

Cb-V

---

Cb+V+Ti

---

Si

---

Cu

0.500 max

Al

---

Ca

---

Cr

0.400 max

Ni

0.400 max

Mo

0.150 max

N

---

CE III

---

CE Pen

---

C

0.068

Min

1.11

P

0.014

S

0.004

Cb

0.018

V

0.0020

Ti

0.007

Si

0.210

Cu

0.023

Al

0.028

Ca

0.003

Cr

0.022

Ni

0.023

Mo

0.005

N

0.0056

CE III

0.0052

CE Pen

0.0053

0.0053

0.0050

0.0056

0.082

1.14

0.013

0.018

0.0030

0.009

0.220

0.032

0.036

0.002

0.019

0.017

0.004

0.005

0.069

1.15

0.016

0.018

0.0040

0.009

0.220

0.036

0.037

0.002

0.022

0.005

0.0056

CERTIFICAMOS QUE LA TUBERIA AQUÍ DESCRITA CUMPLE Y HA SIDO FABRICADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO CON LOS REQUISITOS APPLICABLES DE LA ESPECIFICACION: ASTM A53

WE CERTIFY THAT THE ABOVE DESCRIBED PIPE HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION, AND MEETS THE APPLICABLE REQUIREMENTS THEREIN

*[Signature]*

ING. LUJIS ALFONSO DE LOS SANTOS RIVERA  
SUPERVISOR DE LABORATORIO METALURGICO  
METALLURGICAL LABORATORY SUPERVISOR

ASTM A53